

11/25/98

Monitor Synchronization

Are you in sync with your monitor?

Many problems can arise if the SS200 series cameras are not in sync with the monitor under test. Visually, you might see a periodic popping or jumping of the video signal due to the beat frequency (aliasing) generated when the refresh rate does not match the sampling rate of the camera. Erratic or inconsistent results may also be generated if synchronization is not maintained.

Synchronization Sources:

Internal Pattern Generator - The integrated pattern generator is the preferred and most common source for synchronization. It provides the sampling rate for the camera; the vertical sync pulse, and simultaneously provides the drive for the monitor. It also provides for automated pattern control for operations like beam finding, autofocus, convergence color control, and geometry measurements.

External Sync - If an external pattern generator is to be used, it is important that the SS200 series system is synchronized to the external source. A TTL level sync pulse (vertical sync rate) needs to be supplied to the system. This is done by connecting a to the appropriate BNC connector on the back of the system (VSYNC IN or VIN). The system then needs to use this sync and there are several ways to do this. If the signal is applied prior to starting the SS200 system, it will automatically select the external source and disable the integrated pattern generator. (Note: if the ext. sync is lost during operation, the system will then default back to the integrated pattern generator. See the variable "Vertical Sync Source" for ways to override or save sync source selection.)

Mvremote - Mvremote is a program that is run on an external PC to enable the PC to act as a remote pattern generator. This is commonly used when the computer and drive wish to be tested as a system rather than evaluate the individual monitor. Mvremote allows the operator to enter the vertical sync rate into the program so that this rate can be passed back to the SS200 series system for synchronization.

Internal Sync- the SS200 series systems have a programmable timer that can be used for synchronization. This should be used only when the integrated pattern generator or an external sync source cannot be used. To select the internal source, the variable ="Vertical Sync Source" in the main setup needs to be set to = "Internal Clock" and the ="Clock Sync Rate (Hz) ", set to the desired sampling rate. This will provide satisfactory results but be aware that the system is not "locked" in sync and there may be an occasional "jump" of the video signal.